

accidents must have occurred bringing under his notice the melting of copper. The addition of a little tin to the copper followed and bronze instruments were cast. This was an advance of far reaching importance. The tribes which remained ignorant of the use of the new metal compound were left behind in intellectual and material development. Of the alloy were made, Celts, swords, knives, pins, rings, bracelets, fish-hooks, sickles, saws, needles, buttons, arrow-heads, lance-heads, awls, rivets, chisels, etc. In the course of time much skill was shown in the construction and ornamentation of bronze implements, and regular foundries were established. Improvements were made in land, as well as lake and underground dwellings. Better boats were built, and commerce, "the civilizer of nations," received a new impulse.

There is no evidence from any quarter of the globe tending in the least to prove that the first men were perfect in any respect, and have fallen. Every investigated cave or lake dwelling, every tomb or mound, every implement, every trace of primitive man prove the contrary. There is not to be found a continent or large island, that does not furnish proof that its inhabitants have passed through the usual course of evolution from men without artificial tools, in a condition of savagery upward to the crude stone age, and still higher according to their capacities and opportunities.

Travelers have made us acquainted with a number of tribes, in recent years, that were in their stone age period, and some few that were below it, but struggling toward it. This gives the student excellent opportunities to judge of the early stages of development of the physical, intellectual, moral, inventive, religious, and other traits and qualities of our own ancestry. The con-

ditions existing among savage tribes when first discovered by more civilized men, were, with comparatively unimportant variations, characteristic of our own progenitors at some more or less remote period.

In this way much light can be thrown upon the early history of the human race.

The inhabitants of the Andaman Islands are thought by some to be the most primitive of the human race. Their huts have roofs of bamboo, or palm-leaves ; the sides are left open. They hollow out logs, making of them dug-out canoes. At first they used bone tips for their arrows, harpoons and spears. They have no pottery, but use shells to hold water. They are skillful fishers, using nets and harpoons. They wear no clothes, count only up to two, and have no religion, nor belief in a supreme being, or in a future state of existence, and keep no domestic animals. The widow wears the skull of her dead husband suspended from her neck by a cord, using it for a trinket box. The other relations are content with a bone apiece. This custom ties them to the dead past—and serves one purpose of a religion ; is in fact a germ from which the reverence for gods, saints, angels, authorities, and the past, in the modern religions has evolved.

The Hottentots had no religion, unless, indeed, certain ecstatic dances might be so called.

Some of the tribes of Australians had scarcely any huts, and ate putrid meat, grubs, snakes or anything a starved dog would eat. They use fire in hollowing out tree-trunks for canoes. Instead of canoes they sometimes used logs of wood sitting astride of them and paddling them with pieces of bark. They had no pottery and carried water in skins. Some had stone hammers, hatchets, and knives and splinters of flint, and used

sticks and boomerangs instead of bows and arrows, of which they were ignorant. Like many other savages they obtained fire by rubbing two pieces of wood together. They could not count above four, and their religion was very primitive, consisting of fear of the dark and of mysterious evil beings ; and faith in witchcraft.

The Fuegians have arrows and javelins pointed with bone or stone and also slings and wooden clubs for weapons. Wallis relates that he saw a native take a live fish, kill it by biting near the gills, and then proceed to eat it, "beginning with the head, and going on to the tail, without rejecting either the bones, fins, scales, or entrails." They ate prisoners taken in war, and also the oldest women of their own tribes. Women are customarily illtreated by savages, and have about the same chance as dogs. Some of the Fuegians believe that there is a powerful being that lives in the woods. They carry their dead into the woods and cover them with boughs and old chunks of wood. They had no religious worship. Numerous savage tribes can be mentioned that had no belief in a supreme being, or, in the immortality of the soul, or in any form of religion ; unless a belief in witchcraft and mysterious evil beings may be so regarded.

The Fijians believed, as stated by Lubbock, that "as they die, such will be their condition in the next world." This somewhat advanced belief in immortality caused the young people to kindly kill or bury alive their parents, so that they might start out younger and better able to travel the difficult road to heaven. Their faith was so strong that even the victims went cheerfully, and even joyfully, to their own funerals. There were no old people left in that section of "this vale of tears." Yet,

these people, who were constant eaters of human flesh abstained from eating their parents ; but, perhaps, not so much from piety, or a sense of filial love, and duty, as from the fact that there were plenty to be had who were younger and more toothsome. Measured by the standard of faith, and the works naturally following it, the world has seen no people who would stand higher than these simple islanders ; not even those who like Abraham, of old, were ready to slaughter their own sons.

Savages may show very good judgment in most things, may be able to send the arrow or the boomerang straight to the mark, or pick out and eat the best human joints themselves and leave the poorest to the women ; but we owe them no apology when we value reason above faith, and accept Science and reject superstition. Another result of their belief in a future state of existence was that when a chief died, wives and slaves were killed and buried with his body so that they could go with him on his journey to heaven.

The native New Zealanders were a warlike race and fortified their villages with palisades and ditches, and as is ever the case, their gods were just as warlike, but a little more powerful than themselves. Their idea of heaven was that it was a place of continual feasting and fighting, where "they would be victorious, and have plenty of fish and sweet potatoes." Their principal god was a cannibal like themselves and they offered him human and other animal sacrifices. The smell of cooking flesh was a "sweet savor" to him. Sacrificial worship was practiced by many peoples of the earlier times, as every Bible student is aware. The New Zealanders had another strange notion,—the belief that when they ate the bodies of their enemies they acquired

their souls also. For the sake of gaining their wisdom they would devour the tough and otherwise undesirable bodies of old chiefs killed or taken in battle.

The most advanced people yet in their stone age were the Society Islanders. They had reached in very many respects a condition closely approaching civilization. They had plenty of good boats, carried on commerce, made excellent cordage, and cloth, and baskets, and kept hogs, dogs and poultry. With their general advance their religion had also become superior to that of other tribes and islanders, but was still a drag in the rear of their progress, as has been the case with every nation from the first. They sacrificed to their gods, and sometimes "offered up" human beings, and they believed in a first-class heaven for the chiefs and the "superior classes," and a sort of second-class heaven, or first-class hell for the common people. This plan of salvation was simple, and so natural that a trace of it may yet be found in more than one system of religion.

Some tribes of the North American Indians had no religion; no belief in a supreme being or a hereafter, while others believed in the "Great Spirit," and expected to live hereafter as they did in life, by hunting and fishing in the "happy hunting grounds." The arms of the deceased are buried with him.

The Esquimaux had no religion and were morally superior to average savages; they were honest and trustworthy.

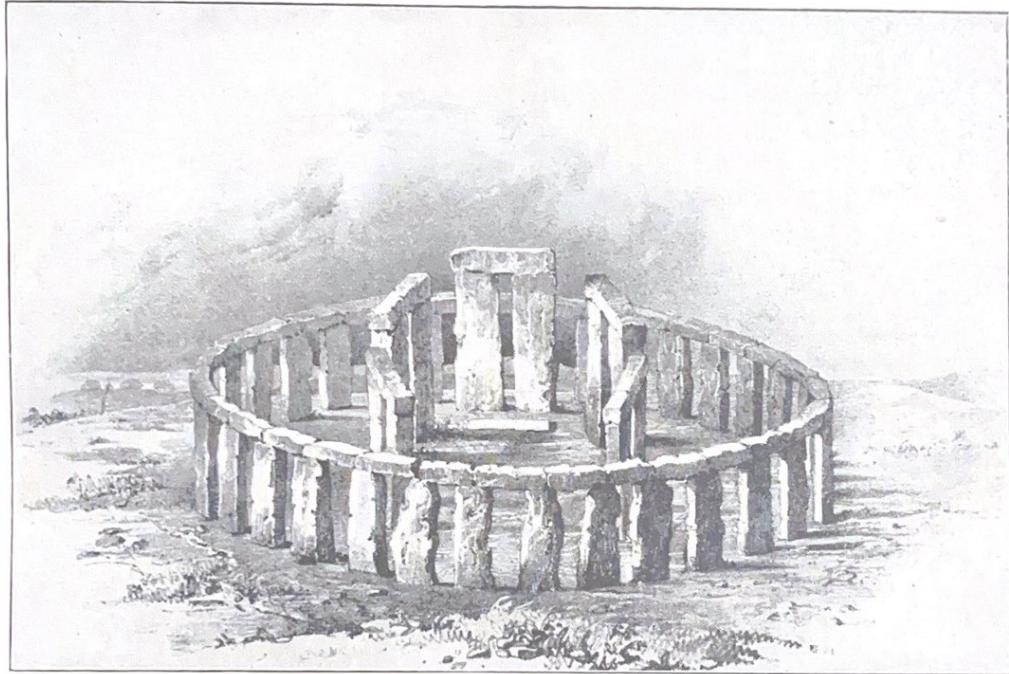
Some Patagonian tribes had horses, and these tribes in addition to burying the arms of the deceased with his skeleton, and raising a cairn of stones over his grave, placed around it several dead horses supported in a standing position by props. According to Homer, at the burning and burial of Patroclus, horses and dogs,

and twelve captured Trojans, were killed and burned. The idea seemed to be that horses, dogs, and even weapons had souls or shadows that would be useful to the deceased warriors on their journey.

Sir John Lubbock after a careful examination of the evidence arrives at the conclusion that "those who assert that even the lowest savages believe in a Supreme Deity, affirm that which is entirely contrary to the evidence." Among those who do not believe in a god or gods may be mentioned the Indians of the Upper Amazon, the Samoans, the Aru Islanders, the Abipones, the Hottentots, the Kaffirs and the Bushmen. The tribes that praised their deities when their affairs were prosperous, and blamed them when things went wrong, or put up "scarce-crows to frighten away their deity," or blamed him for their toothache, or prayed to him to stop the ravages of grasshoppers, (see the prayer and grasshopper proclamation issued a few years ago by the governor of a western state,) were nearly in the same class in many respects.

The savage, like the primitive man, was continually and habitually alert, expecting to be attacked by enemies or dangerous animals; asleep, they were the subject of his dreams. Fear was always present. He was often unable to distinguish between subjective and objective impressions. It was but a step farther to a belief in invisible beings that possessed some mysterious influence for good or evil.

Stones have been used from very early times to mark boundaries and graves, and as memorials of places and events. They may be rough or hewn, plain or inscribed, single or in heaps, or in elaborately built pyramids. Heaps or mounds of earth were also largely used for the same purposes. Both earth and stones have been



*Stonehenge according to Waltine.*  
From the *Celtic Druids*, by Godfrey Higgins, Esq., F.S.A.

## OLD STONEHENGE IN WILTSHIRE.

In a review of "*Stars and Stories*," recently published in London, the editor of *The Literary Guide*, refers incidentally to Stonehenge, as follows :

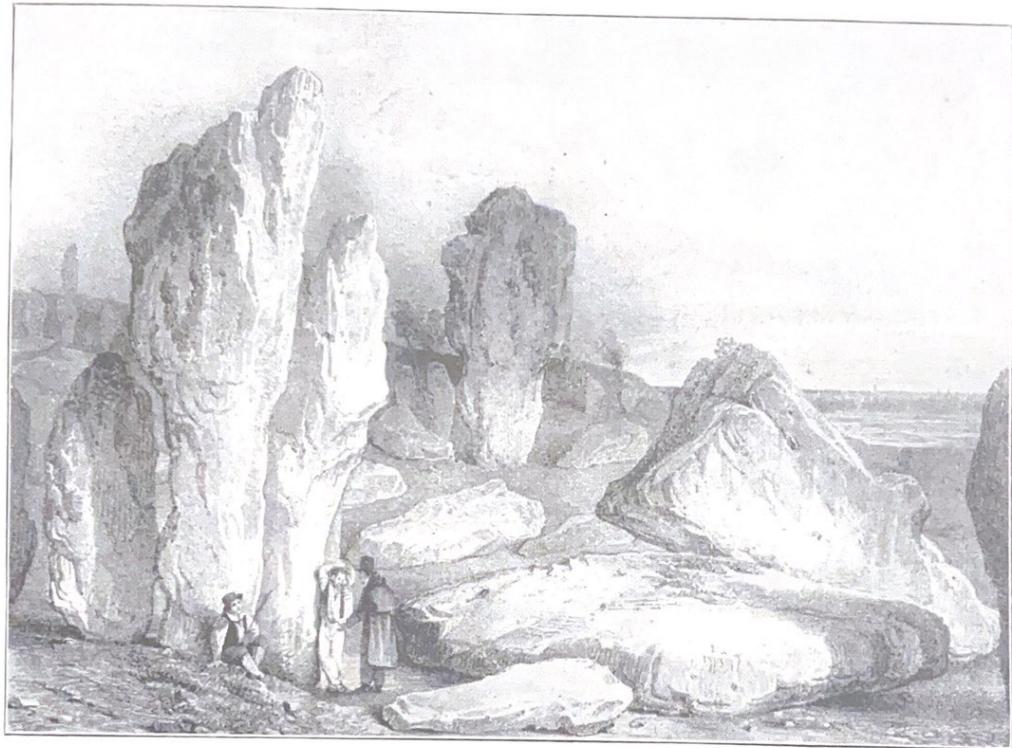
" Let us travel for a moment to old Stonehenge in Wiltshire. These leaning, fallen, and scattered stones once formed a temple of clean-cut monoliths. One big pillar stands at a little distance. It is known as the Friar's Heel. The local legend has it that on the morning of the longest day of the year a man may stand at the central altar-stone and see the sun rise exactly over the Friar's Heel. This period of the year is of course the summer solstice, when the sun seems to pause before again traveling southwards towards the equator. And the Wiltshire legend has proved correct. In olden times the priests watched over the agricultural interests of the country, and they did useful work in calculating the movements of the sun, so that all men might know the due succession of nature, and arrange seed-time and harvest, etc. As in Britain, so in Egypt. The Egyptian temples were so built as to afford opportunities for exact calculation both of sun and stars. On such knowledge the priestly astronomers could base reliable predictions of the rising of the Nile and its beneficent expansion over the fertile valley. Mr. St. Clair describes with what solemn accuracy the foundations of a sacred structure were laid. The king himself would take part in the ceremony at early morn. At sunrise he planted a stake on the spot chosen for the Holy of Holies. Another stake was fixed some distance off in such wise that the sun and the two stakes stood in one and the same alignment. Suppose this was done on the longest day of the year. Then next year and every year the sun, at the summer solstice, would throw its majestic gleam along the pillared avenue of the temple, flash into the central sanctuary, and fling its beam upon (perhaps) a mirror reverently placed there to receive the holy light. The priests and the nation would know that the calendar had attained one of the supreme points of the annual career; and men would rejoice to know the world and the heavens were still in accord and the heavenly bodies still preserved their august custom. The sun had performed his yearly circuit, and had come round to the same place, and was looking in at the same door. Hence, in the spirit of worship, Egypt praised the eye of Ra (the sun), and used the eye as a charm or amulet to be worn upon the person."

extensively used in fortifications, and stone and brick for building dwellings and temples. In almost all parts of the world such evidences of the existence and condition of pre-historic men are common. In the Bible frequent reference is made to heaps of stones and stone pillars being erected as witnesses to notable events.

Among the most generally known of the pre-historic ruins is Stonehenge, a collection of huge stones on Salisbury plain, Wiltshire, England. There are 140 stones, weighing from 10 to 70 tons each, and they were originally arranged to form two ovals within two circles, with a bank of earth 15 feet high and 1,010 feet in circumference surrounding the structure. The stones, though weather-worn, still show the sharp angles of the tenons and mortises by which they were joined; the stones were roughly hewn. In the center of the work is a flat stone slab, 15 feet long, which is supposed to have been the altar. There are some 300 burial mounds within sight, scattered over the plain. Many of them have been opened and found to contain partly cremated human bones, fragments of pottery, and some of them bronze implements. The larger stones were doubtless obtained in the neighborhood of the temple. When this temple was erected is unknown; but there are good reasons for the opinion that it was in ruins at the time of the Roman invasion, 55 years B. C. There has been much discussion over this point, and various periods from 10,000 to 50,000 years ago have been supported by different authorities, but the evidence is by no means sufficient to justify any conclusion other than that it dates from a very remote antiquity. There are in this day modernized Stonehenges with stately steeples, in every hamlet and at the cross-roads, where much of life, liberty, progress and humanity are sacrificed.

At Abury, in Wiltshire, England, was a similar, but probably still more ancient temple, that in some ways surpassed Stonehenge. The outer ditch and bank enclosed  $28\frac{1}{2}$  acres. Inside of this was a circle made originally of 650 large unhewn stones. There were two small circles made of smaller stones inside the large circle. From the ruins of this temple two winding avenues of stones start and diverge in a serpentine form; one ending in a small stone circle. Midway between the ends of these avenues rises an artificial mound 130 feet in height, called Silbury Hill. That this hill existed before the Roman conquest is proved by the fact that the builders of a Roman road changed from a straight line to avoid the hill. Of the people who constructed this wonderful work, or the period in which they flourished nothing is known; but there is reason to believe that the Phoenicians extended their commercial voyages as far to the north as Britain, and their civilization may have been a factor in so great a work. This idea is however of little value, for the ruins in question may have been ancient at that time. The ancestors of those who speak the English language were in their stone age when they made the temple, as the character of the work indicates.

Many monuments to the dead, consisted of a single unhewn or roughly hewn stone set upright, many others of heaps of stones, and others of stones placed in circles. The sepulchral circles vary greatly in size as do their component stones. Perhaps the most remarkable of these works is at Carnac, in Brittany. It consists of eleven rows of stones of different sizes up to 22 feet high. These rows of monumental stones originally extended several miles. The stones are unhewn and are therefore probably set by men unacquainted with metallic im-



*Monument at Carnac.*

plements. There are tribes in Asia that at the present day have the custom of using stones and stone circles for monuments. By putting two long poles under a heavy stone with numerous small cross poles for the men to take hold of, several hundreds of men move stones weighing several tons. Men enough, in this primitive manner, could in time construct extensive works. Rough hewing and mortising could be done with flint tools.

Dolmens, or table stones, flat stones supported by two or more others, are of frequent occurrence. Often the supporting stones are also flat and form the sides of a sort of box, or tomb, or table. Formerly they were held to be old altars for sacrifices. Now they are generally thought to be sepulchers. An opening was left through which offerings could be put in, or the spirit could escape.

The Indians made some use of copper from the Lake Superior region, but there are excavations more ancient of great extent, and twenty or thirty feet deep, proving that prior to their time the mines were worked by a more highly civilized people. Trees hundreds of years old, as shown by their annual rings, have grown on the dirt thrown out. Great numbers of tools were found, and a mass of copper weighing six tons lay as it had been detached by the unknown miners.

This ancient race was well advanced in the potter's art, and many fine specimens have been found in the numerous mounds scattered through the valleys of the Great Lakes and the Mississippi. Bowls of pipes were ornamented with accurate representations of the principal animals and birds of the region. There were shell-beads and copper-bracelets. The scarcity of weapons, and the final migration of the race southward, or

extermination, shows them to have been a peaceful people. When, and from whence the Mound Builders came is yet unknown.

We know that they were compelled to build defensive earthworks, and that their fortifications displayed considerable skill. The fortifications generally occupy strong natural positions, near the summit of steep hills, and consist of an embankment, and usually an exterior ditch. The question of water supply for the garrison was not overlooked, and gateways and approaches were well protected by interior, and sometimes exterior embankments. Fort Hill, Highland County, Ohio, has a line of circumvallation nearly four miles in extent, and from ten to twenty feet in height. Fortified Hill, Butler County, Ohio, and the Bourneville works in Ross County, are among the fortifications worthy of special mention.

Another class of works associated with the fortifications and mounds, are supposed to have had their origin in religious beliefs and ceremonies. They are found on plains instead of hills, and the ditches are inside instead of outside the embankments. They are of more regular outline, forming perfect circles, squares, octagons and other geometrical figures. A work of this kind at Newark, Ohio, covers an area of four square miles, with embankments from two to twenty feet in height, and it includes a large octagon, and a square, two large and a number of small circles, parallel walls, etc. In another at Chillicothe, Ohio, a large circle was united by a short passage-way, to an octagon of about the same size. At each angle of the octagon, an opening was protected by a mound on the inside.

Mounds of earth and stone, of various sizes and regular shapes are numerous. Such a mound in Illinois opposite the city of St. Louis was 700 feet long, 500 feet

broad, and 90 feet high, and contained about 20,000,000 cubit feet. Most of these mounds are probably sepulchral, and evidences of burial have been found in many of them. Others that have a flat space on top, avenues or means of ascent, like terraced pyramidal structures, were used as temples, or sites of temples or dwellings, for the rulers, and for points of observation ; but their principal use was as temples. The temples were built of wood or bark, on top of the pyramids, and were reached by winding paths. They were rude structures that reached a higher development in Mexico and Central America. Their resemblance to temples and structures of the old world does not imply that they were derived from them, but does prove that humanity everywhere passed upward along substantially the same lines of development. This class of mounds are more numerous toward the south, and bear more resemblance to ancient Mexican works.

The Mound Builders not only made accurate representations of animals on stone and pottery, but in thousands of instances they left examples of their art in the form of animal mounds. These are most numerous in Wisconsin and Iowa. They are from one to six feet high, and represent men, buffaloes, bears, elks, otters, wolves, raccoons, lizards, turtles, alligators, frogs, birds, etc. They vary in length from less than one hundred up to several hundred feet. A serpent-shaped mound in Adams County, Ohio, is over 1,000 feet in length and five feet high, gracefully curved, tail coiled, and with open mouth, in the act of swallowing or ejecting an oval figure, formed also of an embankment of earth. Whatever it was intended to signify, it represents very well the oriental cosmological idea of the serpent and the egg. It seems to me probable that the

serpent was regarded as a sacred emblem, and that the Mound Builders were in a state of zoolatry, or animal worship. This idea would account for the immense amount of time and labor expended in making the huge animal mounds. There are some indications that the Sun and Moon were included among their deities. There is much evidence tending to show that unlike the majority of their Indian successors they were an agricultural people, with a dense and widely spread population.

Among the pre-historic ruins of Mexico are pyramids built of cut stone, square, rising in stages, and level at the top. The pyramid of Cholula, as measured by Humboldt was 160 feet high and 1,400 feet square at the base, covering an area of 45 acres.

At the time of the Spanish conquest, time had effaced all knowledge of the times when the ancient pyramids, temples and cities then in ruins, had been built.

Extensive ruins are found in Central America, with temples massively built and ornamented with richly carved figures. In Peru are similar ruins, temples, aqueducts, bridges, and paved roads hundreds of miles in length, and passing along mountain sides where the difficulty of construction was enormous.

The great temple of the Sun, at Cuzco was attended by 4,000 priests. There were many temples, but little means of defence against rapacious and skillful enemies. On the shores of Lake Titicaca were wonderful works whose origin was lost in antiquity. There are rows of great stones, some rough and some hewn, foundations, mouldings, cornices, doorways carved from single blocks of stone; ornamental carvings, and a terraced earth mound 650 feet long, 450 feet wide, and still remaining 50 feet high. There are stones of hard trachyte cut



*Wringcheese, near Liskeard, Cornwall.*

in a manner unsurpassed by any stone workers. Some dressed stones are twenty-five and one-half feet long, fourteen feet broad and six and one-half feet thick. Near Truxillo there are the ruins of the ancient capital city of the Chimus, covering 20 square miles ; ruins of every kind, dwellings, temples, furnaces, prisons, and shops. One of the pyramidal temples is 812 feet long, 470 feet wide and 150 feet in height.

It is impossible to give an idea of the antiquity or the splendor of the Peruvian civilization that preceded the Spanish conquest ; but it perished miserably when attacked by a handful of more warlike, but, in many respects, less enlightened men. The Peruvian Sun-worshippers were powerless before the followers of the cross,—the unscrupulous users of gunpowder, and insatiable seekers after gold.

The great pyramids of America had a greater area at the base than those of Egypt, but were not so high. They were easy of ascent, and used for a different purpose ; those of Egypt being used for tombs and those of America for purposes of worship.

Every year the Nile overflows and spreads a thin layer of mud over the adjacent plains, and builds its delta a little farther out into the sea. The number of inches of mud that has accumulated during the historical period has been ascertained with reasonable precision. It has been burying the foundations of great structures at a steady rate, so the deposit per century can be relied upon as a basis for estimates. The total depth of the Nile deposit has been found by digging ; and ancient Egyptian relics have been taken from the bottom, next to the undisturbed strata. Without allowing for the deposit being more compact by pressure as we descend, the time required for the work is nearly

12,000 years. This estimate agrees very well with what the historian, Herodotus, learned when in Egypt. Those who have no "accepted" chronology to bolster up will see no good reason to question the opinion that Egypt has been an inhabited country for at least twelve or fifteen thousand years, and that it was a prosperous nation, well advanced in the arts, at least five thousand years before the Christian Era.

The pyramids of Egypt are the monuments and tombs of kings, are found in a necropolis, and contain sarcophagi and mummies. The largest one covers an area of about 13 acres and contained 89,000,000 cubic feet. Its height was 479 feet and the length of its sides at the base 764 feet. In one of the sepulchral chambers near the center of the pyramid was found a sarcophagus too large to have been introduced through the entrance, therefore it must have been put in place before the room was finished. It contained the mummy of a king, richly decorated. There are numerous other pyramids built on the same general plan. To quarry the thousands of huge stones, hew them, transport them from a great distance, and raise them into place, required an amount of time, labor, and a degree of mechanical skill calculated to discredit the theory that mankind had been recently created. It required a long time for that branch of the human family to develop from the first stage of making artificial tools or beginning to use a few words, up to the construction of these surprising works. The most skillful modern builder would hesitate to undertake the job of duplicating these mighty structures.

The great sphinx is located near the great pyramid. The length of the body is 146 feet, and it is 36 feet across the shoulders. The head is 28 feet from the top



*Cromleh at Plas Newydd in Anglesey.*

to the chin. A small temple was built between the paws. The temple and paws are of solid masonry, but the rest of the sphinx is made of one piece of stone ; a hole drilled 27 feet deep into one of the shoulders proved it. Smaller figures of the same kind, the head of a man on the body of a lion, were used along the approaches to the temple. Plutarch said they were placed before the temples as types of the mysterious nature of the deity.

The obelisks were hewn from single stones, and the large ones, 100 feet high, and weighing 400 tons, had to be transported in some instances 800 miles from the quarries to the places where they were to be erected. With any means at the command of the Egyptians this process must have required a number of years to accomplish. These wonderful shafts were probably used as monuments to perpetuate the fame of the great and powerful.

The ancient cities of Memphis and Thebes attest by their magnitude and the grandeur of their ruins the advanced state of the early Egyptian civilization.

At Elephanta, a small island of India, is a cave temple of unknown antiquity, 123 feet in breadth and 130 feet long, with many well executed sculptures. At Ellora are much greater cave temples, excavated in a hill of granite and basalt. The sculptured excavations are over a mile in length. The temple of Siva is 185 feet by 401 feet. There are many colossal figures ; and the whole work rivals the pyramids in the amount of labor required.

The Egyptians carefully embalmed their dead to preserve the bodies as long as possible for the souls to again inhabit on their return. Their ambition to shine in the future was greater than that of any other people because

of the peculiarity of their religious belief. Their works were therefore made as massive and imperishable as possible, that they also might endure to the glorious coming time when the body would be resurrected and re-united with the soul. We, therefore, must consider the pyramids, obelisks, etc., as having been constructed for monumental and religious, rather than for astronomical or other scientific purposes.

In Italy and Greece, in Palestine and Syria, in Egypt and India, in Arabia and Peru the ruined cities and temples of once prosperous nations lost in antiquity, are found ; but there are also found the stone implements of the primitive inhabitants of the countries. Compared with their times the builders of the pyramids were modern. The great works, though remote, were thousands of years later than the cruder work of the same varieties of men. Therefore, instead of the fall of man from a state of perfection, we have, in fact, the ascent, taken as a whole, of man from a state of savagery. It is simply a continuation of the evolution of geological times in accordance with the doctrine of descent.

Savage tribes have very few words in their language. Languages are of slow growth, and words are added only as necessity requires. Primitive man had become widely distributed, and the several varieties of men were distinctly branched off before anything that could be called human language had evolved. Means of communication through signs and inarticulate sounds as used by the lower animals were sufficient for their needs at first. Their language grew with the growth of experience and knowledge. All that men have attained has been slowly evolved with themselves. Their languages were no exception to the rule.

With the savage, everything begins small and simple

as with the child, and improves by the slow evolutionary process. For example take the plow. At first men used their hands to mellow and mix the ground, then ordinary sticks, then flattened sticks, then crude wooden spades, then a forked limb drawn as a plow, then improved wooden plows, then bronze tools, then various grades of iron plows and so on to the latest patterns of steel and steam plows. Those we now have will be improved; the first are never the best. In the pre-historic age the more advanced nations though well acquainted with a few useful things were behind the later centuries in nearly all important points.

There were times when the gain of centuries was lost by the inroads of barbarous and ambitious enemies, the zeal of fanatics, or the enervation of wealth. Such checks were only temporary. That which was lost in one direction was often gained in another. Nations have their life-history the same as do their individual units; their periods of childhood, youth, maturity, decline and death. The declining nation, like the dying limb of a tree, was often succeeded by one stronger, better and more vigorous. Thus, taken as a whole, the progress of humanity was secure.

There was a great advance made by the ancestors of the Caucasian race in religion, the arts, agriculture, commerce, etc., before books were written. Much valuable teaching was done orally. Records of events for the information of their posterity were not altogether left to the uncertainty and general unreliability of tradition. Heaps of stones and plain monuments were not much better, but they were followed by statuary and pictures, and in the course of time by picture writing. This led naturally to the use of cuneiform alphabetical characters and crude and pompous records were engrav-

ed on stones, monuments and buildings. As the centuries rolled away, stone and brick tablets became more common in the great cities of Western Asia and Egypt. It was a short step to the use of parchment and the invention of the art of writing. Before that time historians and poets, for instance Homer, went about repeating their productions to interested hearers. The mental task of composing and thoroughly memorizing must have been severe. The works could only be left for the next succeeding generation, through the trained memory of the younger men. It is no wonder that so little of value, of the literature of that period, has been handed down to us.

If the same differences were found among any of the lower animals that exist between the Caucasians and the Africans they would unquestionably be classed as distinct species, unless, indeed some lame creed stood in the way of acknowledging the truth. According to the old belief in the stability of species, each ought to have been assigned a separate origin. With the fact of the truth of the theory of descent through adaptation and selection fully established, all the species or varieties of men may be considered as derived from a common stock. Some one species of ape had become more human than any other. This assumption leaves the matter in doubt, for varieties arising from this family of anthropoid apes went out from the ancestral home at a time when they might not have been properly classed as human. As we have seen, some existing tribes are scarcely entitled to the appellation. There is a greater gap between the highest man, a Darwin, a Huxley, or a Haeckel, and the native Australian, than there is between the lowest savage and the highest ape.

If the human race had two primitive sources, the one

probably was in Africa, and the other in the eastern part of Asia, or still farther east in lands now beneath the waters of the Pacific. If one only, the best scientific opinion seems to be that it was located on a continent now submerged in the Indian ocean. They spread out over the world, dividing into branches and sub-branches, and finer divisions, like the arterial system from the aorta. Here and there they budded into something like civilization, where conditions were most favorable, but, in the main, progress was confined to that which necessarily arose from the requirements of the struggle for mere existence. This human animal had already reached Western Europe before his form had become more than half erect, as his remains found there prove. Often they advanced into new territory and succumbed or retired, and other invasions followed, until the occupation of the new territory became permanent. The survivors of the earlier invasions, unable to progress, often remained in a state of savagery or inferiority, and had to submit to the superiority in arms and civilization of later colonists.

Three great branches lodged in Central and Southern Africa, in a climate where necessity did not require exertion, and are represented by the Kaffirs, Hottentots and Negroes. The adaptation to the conditions of their existence requiring little effort, their development was slow. Similar easy conditions in the East Indies, Australia, and the South Pacific Islands, or in the primeval continent of which they represent the highest peaks, caused like results as are exemplified by the Papuans, Australians, and Malays. The Mongolians spread to the north and north-east, covered Eastern and Northern Asia, and crossed into America when the continents were probably connected by isthmuses where are now